

Attorney's Docket No. 32323232-001041

1. A flex-print circuit (FPC) attached to at least one bonding pad on a suspension of a head gimbal assembly in a hard disk drive using anisotropic conductive adhesive, comprising:

a base film;

a conductive layer situated below the base film;

an overcoat layer comprising at least two sections situated below the conductive layer, a bottom surface of each section overlapping partially a top surface of the bonding pad; and

a conductive structure forming an electric conduit between the conductive layer and the at least one bonding pad, said anisotropic conductive adhesive being disposed at least surrounding the conductive structure for bonding the FPC to the at least one bonding pad.

2. The FPC of claim 1, wherein the conductive structure comprises gold.

3. The FPC of claim 1, wherein the anisotropic conductive adhesive comprises anisotropic conductive film.

4. The FPC of claim 1, wherein the conductive structure comprises a bump having a height of about 12 to 38 μm .

5. The FPC of claim 1, wherein the conductive structure comprises a gold ball.

6. The FPC of claim 1, wherein the conductive structure comprises a filling completely occupying a space formed by the at least one bonding pad, the conductive layer, and the at least two sections of the overcoat layer.

7. The FPC of claim 6, wherein the filling is less than 10 μm thick.

8. The FPC of claim 6, wherein the filling is about 10 to 38 μm thick.

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9. The FPC of claim 6, wherein the filling is thicker than or equal to the overcoat layer.

10. The FPC of claim 6, wherein the filling is thinner than the overcoat layer.

11. A head gimbal assembly (HGA) circuit structure attached to a bonding pad on a suspension of a head gimbal assembly for use in a hard disk drive using anisotropic conductive adhesive, comprising:

a base film;

a conductive layer situated below the base film, a part of said conductive layer attached to the bonding pad using said anisotropic conductive adhesive; and

an overcoat layer situated below a portion of the conductive layer, a bottom surface of said overcoat layer not overlapping a top surface of the bonding pad.

12. The HGA circuit structure of claim 11, further comprising a conductive ball positioned above the bonding pad forming an electric conduit between the conductive layer and the bonding pad.

13. The HGA circuit structure of claim 12, wherein the conductive ball comprises gold.

14. The HGA circuit structure of claim 11, wherein the anisotropic conductive adhesive comprises anisotropic conductive film.

15. The HGA circuit structure of claim 11, wherein a portion of said conductive layer is bonded to the top surface of the bonding pad directly using said anisotropic conductive adhesive.

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16. A method for bonding a flex-print circuit to a suspension in a head gimbal assembly, comprising the steps of:

Forming a conductive structure between a bonding pad and a conductive layer of the flex-print circuit; and

Bonding the conductive layer to the bonding pad via the conductive structure using anisotropic conductive adhesive.

17. The method of claim 16, wherein the anisotropic conductive adhesive comprises anisotropic conductive film.

18. The method of claim 16, wherein the conductive structure comprises a gold ball.

19. The method of claim 16, wherein the conductive structure comprises a solid conductive material filling.

20. The method of claim 18, wherein the gold ball is formed using stud bump bonding (SBB).

21. A flex-print circuit (FPC) attached to a bonding pad, comprising
A conductive layer bonded to the bonding pad using anisotropic conductive adhesive; and
A conductive bump lodged between the conductive layer and the bonding pad.

22. The FPC of claim 21, wherein the conductive bump comprises gold.

23. The FPC of claim 21, further comprising an overcoat layer positioned below the conductive layer.

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24. The FPC of claim 23, wherein the overcoat layer comprises two sections separated by a plating of conductive material, each of said two sections overlapping an end of a top surface of the bonding pad.
- 5 25. The FPC of claim 23, wherein the overcoat layer does not overlap the bonding pad.
26. The FPC of claim 21, wherein the anisotropic conductive adhesive comprises anisotropic conductive film